REMARKS

Initially, Applicant notes that the amendments and remarks made by this paper are consistent with the proposals discussed over the phone with the Examiner during the telephonic interview on October 30th, 2007, and which appear to overcome all rejections of record.

In the Final Office Action, mailed September 7, 2007, all of the pending claims 1-4, 13, 18, 19 and 21-38 were rejected.[1] By this paper, claims 1, 2, 28-30, 32, and 37-38 have been amended and new claims 40-41 have been added, such that claims 1-4, 13, 18-19, 21-38 and 40-41 remain pending, of which claims 1 and 28 are the only independent claims at issue. Support for the claim amendments is found throughout the specification, including the disclosure found specifically within paragraphs [0009], [0048] and [0055] as originally numbered.

As discussed with the Examiner, and as reflected in the claims, claims 1 and 28 are directed to a method and a corresponding computer program product for implementing a method for efficiently searching the interactive broadcast data text descriptions of a video transmission in response to a string of text input by a user in order to identify the particular interactive broadcast data desired by the user. The method is adapted for use in a system that includes a television and a video transmission medium, wherein interactive broadcast data such as electronic program guide information, news headlines, sports scores, or other similar kinds of periodically updated information that can be displayed as text simultaneously with other programming is transmitted across the video transmission medium. The system also includes a management system having a digital processor for processing one or more unique digital signatures that correspond to the interactive broadcast data, and an input device for inputting other digital data that corresponds to user instructions input by a user when searching for particular interactive broadcast data.

As defined by the independent claims (1 and 28), the method includes receiving interactive broadcast data at the management system that includes unique binary signatures that uniquely identify the interactive broadcast data text descriptions. Each of the unique binary

[1] Claims 1-4, 13, 18-19, 21, 23-25 and 27-38 were rejected under 35 U.S.C. 103(a) as being unpatentable over Bruette (US 6,708,336 B1) in view of Chidlovskii (US 6,347,314). Claims 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruette (6,708,336 B 1) in view of Chidlovskii (6,347,314) and further in view of Kessels et al. (4,598,385). Although the prior art status of the cited art is not being challenged at this time, Applicant reserves the right to challenge the prior art status of the cited art at any appropriate time, should it arise. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status of the cited art.

signatures is created prior to transmission across the video transmission medium using a first function adapted to convert the interactive broadcast data into the unique binary signatures. The conversion results in each of the unique binary signatures having a fixed number of bytes. As further clarified by the amendments presented in this paper, the fixed number of bytes includes, for at least one signature, a plurality of distinct four bit binary representations corresponding to a plurality of distinct terms found within a single electronic program guide entry. This includes, for example, converting each of the plurality of terms into a correspondingly distinct four bit binary representation and concatenating the distinct four bit binary representations into a single binary signature comprising the fixed number of bytes. The unique binary signatures received by the system are stored and compared to another signature which is a binary representation of a user-entered text string to be input from the input device to the management system.

Lastly, the method involves retrieving and comparing the unique binary signatures of the interactive broadcast data text descriptions to the unique binary signature of the user-entered text string, and then, based on the comparison, the management system identifies interactive broadcast data that matches the input text string.

The recited claim embodiments can significantly improve the speed and efficiency of searching interactive broadcast data such as an electronic program guide or other periodically updated program information, as noted in the Application.

Two references were used to reject the claims under §103, namely Bruette and Chidlovskii. The primary reference, Bruette, discloses a method of transparently (i.e., without being apparent to the user) generating a database such as an electronic program guide (EPG) as shown in Figure 2, and a method for searching the EPG. As explained by Bruette (see column 5, lines 18 – 67 and column 6, lines 1 – 5), the call sign of each channel is converted into a decimal number using Table 1. The decimal number is stored in a column (column n, figure 2), and later used to identify the channel number when the call sign is input using a keypad. For example, inputting "ABC" with the keypad results in producing the decimal number 111 using Table 1, which in turn identifies channel 02 (see figure 2).

However, the decimal numbers produced by Table 1 are not necessarily unique. As shown in Figure 2, some call signs such as "CBS" and "CNN" will result in the same decimal number (e.g., 155). This in turn requires further processing methodology to resolve the

ambiguity, as described by Bruette at column 6, lines 41 – 58. Further, some call signs may produce a decimal number (such as call sign "DIS" which results in the decimal number 237) that is a "subset" of another call sign (such as "DISC" with its corresponding decimal number of 2371 based on Table 1). Again, this is a further ambiguity that requires additional methodology to resolve, as disclosed at column 6, lines 59 – 67 and column 7 lines 1 – 8.

Bruette clearly does not teach a search methodology receives interactive broadcast data having a unique binary signature created prior to transmission across the video transmission medium, and then selecting and using a second function that converts user-entered text into a unique binary signature having the same number of fixed bytes and which can then be used to identify one and only unique item of the interactive broadcast data (e.g., a unique entry in a program guide for example).

Chidlovskii, on the other hand, discloses an internet search protocol (not video transmission), in which a client query is hashed to produce a signature that is cached at the client, and then used to match a subsequent search query by the client. However, Chidlovskii does not teach using first and second functions that are different from one another but that nonetheless produce the same number of fixed bytes. It will be noted, however, Chidlovskii's signatures are not the same as the claimed signatures that are sent to the client system and that are converted into binary format prior to being transmitted to the user. One major difference is that the claimed signatures are limited in size to a fixed number of bytes. Chidlovskii's signatures do not appear to be limited to any fixed number of bytes, particularly to a field limited in size to 16 bits, 64 bits or 8 bytes, as claimed. (See claims 32, 40 and 41, for example).

Chidlovskii also fails to teach or suggest that the signature field includes a plurality of distinct four bit binary representations with each of the distinct four bit binary representations corresponding to a distinct term, and with all of the distinct four bit binary representations being concatenated into a single binary signature comprising the fixed number of bytes. Instead, Chidlovskii appears to show that a single term is defined by more than a single four bit binary representation and that terms are added through binary addition, rather than by concatenation. (See Figures 2A and 2B, for example).

Accordingly, in view of these apparent distinctions, as well as for the other distinctions previously articulated,[2] Applicants respectfully submit that the pending claims are in condition for immediate allowance.

In view of the foregoing, Applicant respectfully submits that the other rejections to the claims are now moot and do not, therefore, need to be addressed individually at this time. It will be appreciated, however, that this should not be construed as Applicant acquiescing to any of the purported teachings or assertions made in the last action regarding the cited art or the pending application, including any official notice, particularly since many of the dependent claims also present additional distinctions from the cited art. Accordingly, Applicant reserves the right to challenge any of the purported teachings or assertions made in the last action at any appropriate time in the future, should the need arise. Furthermore, to the extent that the Examiner has relied on any Official Notice, explicitly or implicitly, Applicant specifically requests that the Examiner provide references supporting the teachings officially noticed, as well as the required motivation or suggestion to combine the relied upon notice with the other art of record.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at (801) 533-9800.

Dated this 31st day of October, 2007.

Respectfully submitted,

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[2] As previously asserted, Chidlovskii is not properly combinable with Bruette. In particular, one of skill in the art would not be motivated to perform a conversion of either the call signs or decimals (columns (b) and (n) of figure 2) given that the heart of Bruette's search methodology already relies on the conversion of call signs to decimal numbers using Table 1. To convert the calls signs to digital signatures would require one to completely disregard the decimal conversion conceived by Bruette using Table 1, which as noted, is central to Bruette's invention. Moreover, there clearly would be no motivation to hash the decimal numbers, since that would render the decimal conversion absolutely useless and of no value. Thus, to combine Chidlovskii with Bruette is improper, because it would effectively require one to eviscerate or ignore the principal thrust of Bruette's invention.